

PROJECT DESCRIPTION

EQUIPMENT LISTS (CON'T.)

1. GENERAL

This project involves the installation of a new Traffic Control Signal with street lighting at the intersection of MD 117 (Clopper Road) and Kingsview Village Avenue in Montgomery County. MD 117 (Clopper Road) is assumed to run in an east-west direction.

11. INTERSECTION OPERATION

- The intersection is to operate in a NEMA four-phase, semi-actuated mode, with the MD 117 (Clopper Road) approaches running concurrently. A pedestrian phase with pushbutton actuation shall be provided across the west leg of MD 117 (Clopper Road). The pedestrian phase across the south leg of Kingsview Village Avenue shall be on recall. Farside sampling stations shall be provided on both legs of MD 117 (Clopper Road) and the southbound leg of Kingsview Village Avenue at this intersection. Kingsview Village Avenue / Village Fountain Drive approaches shall also run concurrently.
- A full-traffic-actuated, eight-phase controller with three (3) four-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

111. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- Disconnecting and splicing of interconnect cable shall be performed by Montgomery County Forces. The contractor shall run the interconnect cable into the base of each cabinet and properly tag the cable. Contact Mr. Bob Gonzales at (301) 217-2182 seventy-two hours in advance of intended work.
- The cabinet and controller shall be delivered to Montgomery County signal shop for wiring and testing.

EQUIPMENT LISTS

A. EQUIPMENT TO BE FURNISHED BY M.C.D.P.W.&T. AND INSTALLED BY THE CONTRACTOR.

SPEC. QUANTITY	SECTION	DESCRIPTION
900 L.F.	810	50 pair telemetry cable (self-supporting).

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

QUANTITY	SPEC. SECTION	DESCRIPTION
10 Each	814	Furnish and install 12", one-way, three-section (R,Y,G) traffic signal head with adjustable bracket for mast arm mounting and tunnel visors.
2 Each	814	Furnish and install 12", one-way, two-section (DW,W) symbolic pedestrian signal head with adjustable bracket for pole mounting and outway visors.
1 Each	814	Furnish and install 12", two-way, two-section (DW,W) symbolic pedestrian signal head with adjustable bracket for pole mounting and outway visors.
2 Each	817	Furnish and install pedestrian pushbutton.
1 Each	816	Furnish and install eight-phase, full-traffic-actuated, solid state digital controller with three (3) four-channel, rack mount loop detector amplifiers and associated harnesses housed in a NEMA size "6" base-mounted cabinet.
36 S.F.	813	Furnish and install ground mounted sheet aluminum signs to consist of: 4 Each W3-3 NEW "SIGNAL AHEAD" sign, (36" x 36") ground mounted with hardware.
137 S.F.	813	Furnish and install overhead mounted sheet aluminum signs to consist of: 1 Each R10-3C "Pedestrian Education" sign, (9" x 12") pole mounted. 2 Each R10-3C "Pedestrian Education" sign, (9" x 12") pole mounted. (NOTE: Sign to read PUSH BUTTON TO CROSS CLOPPER ROAD) 2 Each D3-2 "Clopper RD" dual faced sign, (variable x 16") mast arm mounted. 1 Each D3-2 "(arrow) Village Fountain DR, Kingsview Village AVE (arrow)" sign, (variable x 32") mast arm mounted. 1 Each D3-2 "(arrow) Kingsview Village AVE, Village Fountain DR (arrow)" sign, (variable x 32") mast arm mounted. 1 Each R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm mounted. 1 Each Associated Shield Assembly "M3-4 "EAST" (24" x 12"), M1-6 "MARYLAND 117" (30 x 24"), M6-1 "ARROW" (21 x 15")" sign, (30" x 51") pole mounted with hardware. 1 Each Associated Shield Assembly "M3-4 "EAST" (30" x 15"), M1-6 "MARYLAND 117" (48 x 36"), M6-1 "ARROW" (30 x 24")" sign, (30" x 51") pole mounted with hardware. 1 Each Associated Shield Assembly "M3-4 "WEST" (24" x 12"), M1-6 "MARYLAND 117" (30 x 24"), M6-1 "ARROW" (21 x 15")" sign, (30" x 51") pole mounted with hardware. 1 Each Associated Shield Assembly "M3-4 "WEST" (30" x 15"), M1-6 "MARYLAND 117" (48 x 36"), M6-1 "ARROW" (30 x 24")" sign, (48" x 75") pole mounted with hardware.

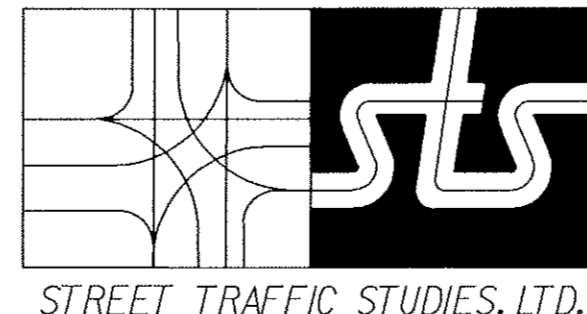
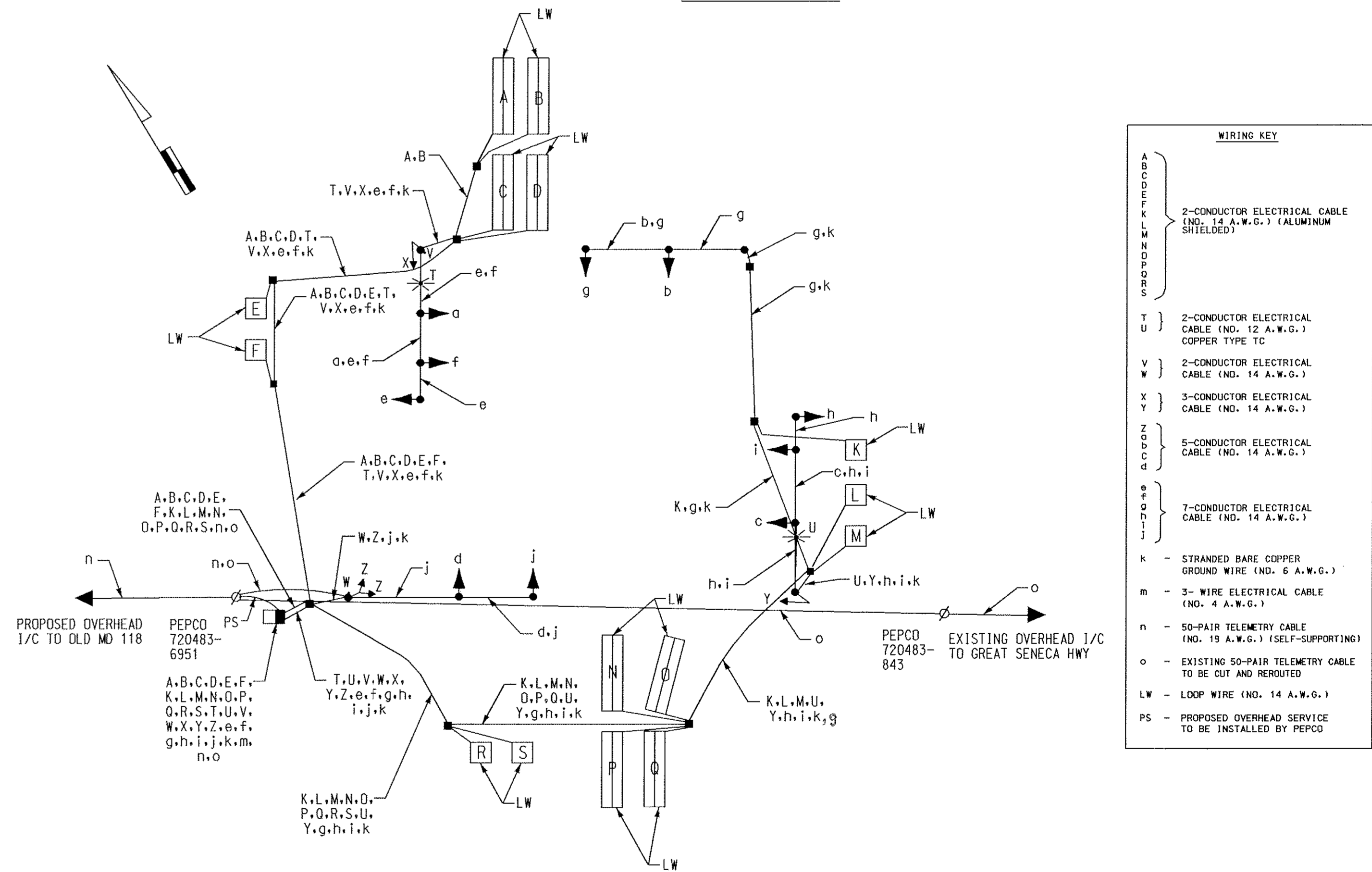
EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR (CON'T.).

QUANTITY	SPEC. SECTION	DESCRIPTION
	L.S.	106 Mobilization
	L.S.	106 Maintenance of traffic.
150 S.F.	104	Temporary traffic sign.
15 U.D.	105	Flashing arrow panels.
2 C.Y.	201	Class-2 excavation.
20 L.F.		Remove curb and gutter.
20 L.F.	609	Furnish and install curb and gutter.
140 S.F.	610	Install 4" sidewalk.
4 Each	204	Test pit excavation.
390 L.F.	500	Furnish and install heat applied permanent preformed thermoplastic pavement marking, white (12" width for crosswalks).
155 L.F.	500	Furnish and install heat applied permanent preformed thermoplastic pavement marking, white (24" width for stoplines).
13 C.Y.	801	Furnish and install concrete foundation.
5 Each	804	Furnish and install ground rod, 3/4" diameter x 10' length.
1 Each	818	Furnish and install 27' steel pole with a 44' mast arm. (Note: 4 anchor bolts will be 1 3/4" x 90".)
1 Each	818	Furnish and install 27' steel pole with a 50' mast arm. (Note: 4 anchor bolts will be 1 3/4" x 90".)
1 Each	818	Furnish and install 27' steel pole with a 54' mast arm. (Note: 4 anchor bolts will be 2" x 90".)
1 Each	818	Furnish and install 27' steel pole with a 60' mast arm. (Note: 4 anchor bolts will be 2" x 90".)
945 L.F.	815	Furnish and install sawcut.
65 L.F.	805	Furnish and install 1" liquid tight flexible non-metallic electrical conduit (detector wire sleeve).
30 L.F.	805	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (riser).
335 L.F.	805	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
260 L.F.	805	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (bored).
40 L.F.	805	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) (trenched).
1 Each	870	Furnish and install 3" weatherhead.
1 Each	807	Furnish and install control and distribution equipment.
10 Each	811	Furnish and install handhole (frame and cover).
565 L.F.	804	Furnish and install stranded bare copper ground wire (No. 6 A.W.G.).
3860 L.F.	810	Furnish and install loop wire (No. 14 A.W.G.) encased in 1/4" flexible tubing.
2435 L.F.	810	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) (aluminum shielded).
255 L.F.	810	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.).
465 L.F.	810	Furnish and install 3-conductor electrical cable (No. 14 A.W.G.).
265 L.F.	810	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
1690 L.F.	810	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).
520 L.F.	810	Furnish and install 2-conductor electrical cable (No. 12 A.W.G.) type THHN tray cable.
900 L.F.	810	Install 50-pair telemetry cable (self-supporting).
90 L.F.	812	Furnish and install wood sign supports (4" x 6").
2 Each	812	Furnish and instal 250W-HPS luminaire.
2 Each	806	Furnish and install 15' lighting arm.
120 L.F.		Pull back and reroute telemetry cable

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	WK	WK	DW	DW
PED CLEARANCE	G	G	G	G	G	G	R	R	R	R	FL/DW	FL/DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
PHASE 4 ALT	R	R	R	R	R	R	G	G	G	G	DW	DW	WK	WK
PED CLEARANCE	R	R	R	R	R	R	G	G	G	G	DW	DW	FL/DW	FL/DW
ALT 4 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM



STREET TRAFFIC STUDIES, LTD.
Gateway International
1302 Concourse Drive, Suite 104
Linthicum, Maryland 21090
Ph (410) 859-3553
Fax (410) 859-3579

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REVISIONS	APPROVALS
	ASST. CHIEF TRAFFIC SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, TRAFFIC & SAFETY

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION <i>Office of Traffic & Safety</i> TRAFFIC ENGINEERING DESIGN DIVISION GENERAL INFORMATION MD 117 AND KINGSVIEW VILLAGE AVENUE			
DRAWN BY: THACKER	COUNTY: MONTGOMERY	TS NO.	SHEET NO. 2 OF 2
CHECK BY:	LOG MILE:	T.I.M.S. NO.	
DATE: 3-5-98	F.A.P. NO.	S.H.A. NO.	
SCALE: N/A			